Siemens buys IX2400 for UHB-LEDs

In September, Siemens AG, Regensburg, Germany, and AIXTRON GmbH, Aachen, Germany, announced signing a contract for the supply of an AIXTRON AIX 2400 Planetary® MOVPE system to Siemens for the mass production of yellow-red ultra-high brightness (UHB) LEDs.

President of AIXTRON, Dr Holger Jürgensen said that "The purchase of an AIXTRON production-scale system clearly indicates Siemens' position as a full-scale mass producer of UHB-LEDs. Siemens selected the AIX2400 UHB-LED manufacturing reactor, what we consider to be the largest and most reliable multiwafer reactor ever made for this application, for a number of reasons. Firstly, it has been developed for highly uniform growth, then the two-flow horizontal reactor with its capability to handle up to fifteen two-inch wafers is well-matched to volume production of these key LED materials.

"The laminar flow design has no turbulence and so we provide precise control of the material composition and ultra-sharp interfaces. And, of course, the AIX2400 is already widely in use around the world and is therefore production proven. In the area of mass production equipment it is also significant that AIXTRON is ISO 9001 certified we were the first MOCVD equipment manufacturer to obtain this internationally recognised certification".

According to Siemens' Opto Semiconductor Business Unit, the AIXTRON installation represents a major investment in production capacity at the Regensburg facility. The company's goal in the LED market is to replace conventional filament bulbs used in many applications such as automotive, traffic control, displays, etc. Moreover, these AlGaInP UHB-LEDs can only be achieved by MOVPE.

Australian blue laser

A project at the University of Sydney, Australia, Optical Fibre Technology Centre, under Dr Simon Fleming is developing blue lasers for improved data storage, surgical techniques and other applications.

The project which is supported by IBM and the Federal Government of Australia for A$2.2 million, has already demonstrated that it is possible to use power from a laser diode to produce a blue laser - the laser light is launched into an Pr-doped fluoride optical fibre and bue wavelength light emerges from the other end.

The workers estimate that this have significant advantages over argon ion type lasers in terms of efficiency (14% giving 30 mW of power) and footprint - it would be suitable for use in a CD player, for example.

Episoft Move

Episoft, developers of the innovative EPIC MBE/PVD control software, have moved to South Wales (UK). The move coincides with commencement of development of new modules to address gas-based deposition systems (CBE, VPE and CVD), has begun and the launch of several new features including:

- Comprehensive system and source alarm monitoring with automated responses.
- Control over complex process loop systems, for example, real-time flux control of multiple-zone cracker source from the growth chamber ion gauge.
- Improved PID engine for applications using Epi-Soft's direct thermocouple processing
- Data Capture facility for automated RHEED monitoring, ion gauge flux calibration etc.
- Automated start-up/preparation of sources so that deposition system is ready to use on arrival of the operator

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